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EXAMINER

HARPER, V PAUL

ART UNIT

PAPER NUMBER

2654

DATE MAILED: 06/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/029,539

Applicant(s)

SHAFFER ET AL.

Examiner

V. Paul Harper

Art Unit

2654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☒ Claim(s) 21 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The Examiner has considered the references listed in the Information Disclosure Statements dated 5/21/02 and 4/8/03. Copies of these Information Disclosure Statements are attached to this office action.

Claim Objections

2. Claim 21 is objected to because of the following informalities: Change "speech a" to --speech to a-- on page 50, line 2. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Smith et al. (US Patent 5,054,082), hereinafter referred to as Smith.

Regarding claim 1, Smith teaches a method for programming devices to recognize voice commands. Smith's teachings include the following steps: entering an identification code that is transmitted to a central repository (col. 3, Ins. 15-18), which corresponds to "capturing an identifier related to a speaker provided over a

communication network"; operating the subscriber unit by voice command (col. 3, Ins. 50-53), which corresponds to "capturing a vocal expression of the speaker"; identifying and requesting a particular codebook from the codebook library (col. 3, Ins. 11-13), which corresponds to "selecting a subset of records from a plurality of records based on the captured identifier"; performing speech recognition based on the stored codebook (col. 3, Ins. 50-53), which corresponds to "determining information related to the vocal expression based on the captured vocal expression and information determined from the subset of records."

Regarding claim 20, Smith teaches everything claimed, as applied above (see claim 1). In addition, Smith teaches that by using speech recognition technology a message (vocal expression) requesting the user's specific codebook is generated and transmitted to the central repository (database) (col. 2, Ins. 16-27, col. 3, Ins. 4-40) where the request is inherently mapped to an identifier to access specific information, which corresponds to "the determining step comprises indexing, based on the identifier, to a record containing information related to the vocal expression".

4. Claims 21 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Kanevsky et al. (US Patent 5,897,616), hereinafter referred to as Kanevsky.

Regarding claim 21, Kanevsky teaches methods for speaker verification, identification and classification employing non-acoustic and/or acoustic models and databases. The methods of Kanevsky include: receiving and decoding a spoken utterance to access information from a database attributable to the speaker (col. 3, Ins.

20-27 or col. 3, ln. 62 through col. 4, ln. 5), which corresponds to "selecting a record from a first subset of records, wherein the record represents multiple items"; eliminating speaker candidates based on the response and activating databases corresponding to the remaining speaker candidates (col. 3, lns. 26-29 or col. 4, lns. 1-15), which corresponds to "determining from the selected record that a second subset of records is required to identify a specific item from the multiple items represented by the selected record"; querying the speaker based on the information contained in the accessed database (col. 3, lns. 28-32 or col. 4, lns. 9-20), which corresponds to "prompting a speaker to provide information to identify the specific item from the second subset of records"; further elimination of speakers based on response with inherent capture (col. 3, lns. 29-35 or col. 4, lns. 10-14), which corresponds to "capturing speech that represents the specific item"; and processing a voice sample attributable to the speaker candidates (col. 3, lns. 35-40 or col. 4, lns. 14-17), which corresponds to "comparing the captured speech a dynamic grammar based on the second subset of records."

Regarding claim 22, Kanevsky teaches everything claimed, as applied above (see claim 21). In addition, Kanevsky teaches that the first spoken utterance may contain indicia of the speaker (col. 3, lns. 22-25) possible including an address (col. 3, lns. 51-60), which corresponds to "first subset of records comprises street address information"; and Kanevsky further teaches that the speaker will then be queried with an additional question based on the accessed database attributable to the speaker or speaker candidates (i.e., questions related to speaker indicia, name, customer number, where if the first response was an address these data would be address related) (col. 3,

Ins. 25-29 or col. 4, Ins. 5-25), which corresponds to "the second subset of records comprises secondary address information related to a particular street address."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith in view of well known prior art (MPEP 2144.03).

Regarding claim 2, Smith teaches everything claimed, as applied above (see claim 1). In addition, Smith teaches several methods for generating a codebook request including the initial use of a speaker independent recognizer (col. 3, Ins. 14-40), but Smith does not specifically teach, "capturing an identifier related to a speaker comprises automatically capturing information provided without input from the speaker." However, the examiner takes official notice of the fact that the automatic sending of speaker information over a communication channel for the purpose of identifying a speaker was well known in the art (e.g. caller ID).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith such that identifying information is

sent when the communications channel is first opened, to customize the communications for the particular speaker.

Regarding claim 11, Smith teaches everything claimed, as applied above (see claim 1). In addition, Smith teaches that the information sent to the server includes speaker indicia, such as name, address, customer number, etc., but Smith does not specifically teach "the identifier comprises a telephone number." However, the examiner takes official notice of the fact that the sending of a telephone number (caller ID) over a communication channel for the purpose of identifying a speaker was well known in the art.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith such that identifying information was sent when the communications channel as an identifier, since this is easily obtainable information.

6. Claims 6, 12, 14, 16, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith in view of Kanevsky.

Regarding claim 6, Smith teaches everything claimed, as applied above (see claim 1). In addition, Smith teaches that a subscriber unit **14** receives a codebook from a central repository **12** (Fig. 1) where a speaker independent portion may reside at the subscriber unit (col. 3, Ins. 5-40), but Smith does not specifically teach "the capturing step is performed by a first server and the determining step is performed by a second

server different from the first server." However, the examiner contends that this concept was well known in the art, as taught by Kanevsky.

In the same field of endeavor, Kanevsky discloses methods for speaker verification, identification, and classification employing non-acoustic and/or acoustic models and databases. In addition, Kanevsky teaches that a user's utterance is sent to a central server with transfers it to an automatic speech recognizer (Figs. 2 and 3, col. 6, Ins. 4-24).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith by specifically distributing the capture and recognition, as taught by Kanevsky, to simplify the support of the various system components.

Regarding claim 12, Smith teaches everything claimed, as applied above (see claim 1), but Smith does not specifically teach, "the identifier comprises address information". However, the examiner contends that this concept was well known in the art, as taught by Kanevsky.

In the same field of endeavor, Kanevsky discloses methods for speaker verification, identification, and classification employing non-acoustic and/or acoustic models and databases. In addition, Kanevsky teaches that indicia (including address information) are used to access speaker specific information (col. 3, Ins. 20-25, Ins. 50-60).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith by specifically using address information, as taught by Kanevsky, to more logically access geographical information.

Regarding claim 14, Smith teaches everything claimed, as applied above (see claim 1), but Smith does not specifically teach, "the identifier comprises location information". However, the examiner contends that this concept was well known in the art, as taught by Kanevsky.

In the same field of endeavor, Kanevsky discloses methods for speaker verification, identification, and classification employing non-acoustic and/or acoustic models and databases. In addition, Kanevsky teaches that indicia (including address information) are used to access speaker specific information (col. 3, lns. 20-25, lns. 50-60).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith by specifically using address information, as taught by Kanevsky, to more logically access geographical information.

Regarding claim 16, Smith teaches everything claimed, as applied above (see claim 1), but Smith does not specifically teach, "the vocal expression is a name". However, the examiner contends that this concept was well known in the art, as taught by Kanevsky.

In the same field of endeavor, Kanevsky discloses methods for speaker verification, identification, and classification employing non-acoustic and/or acoustic

models and databases. In addition, Kanevsky teaches that indicia (including a name) are used to access speaker specific information (col. 3, Ins. 20-25, Ins. 50-60).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith by specifically using the speaker's name to identify desired information, as taught by Kanevsky, to more logically access the speaker's information.

Regarding claim 18, Smith teaches everything claimed, as applied above (see claim 1), but Smith does not specifically teach, "the vocal expression is a number". However, the examiner contends that this concept was well known in the art, as taught by Kanevsky.

In the same field of endeavor, Kanevsky discloses methods for speaker verification, identification, and classification employing non-acoustic and/or acoustic models and databases. In addition, Kanevsky teaches that indicia (including a customer number) are used to access speaker specific information (col. 3, Ins. 20-25, Ins. 50-60).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith by specifically using a number to identify desired information, as taught by Kanevsky, to more logically access the speaker's information.

Regarding claim 19, Smith in view of Kanevsky teach everything claimed, as applied above (see claim 18), but Smith does not specifically teach, "the number is one of a telephone number, zip code, social security number, or database index". However,

the examiner contends that this concept was well known in the art, as taught by Kanevsky.

Kanevsky further teaches that indicia (including social security number) are used to access speaker specific information (col. 3, Ins. 20-25, Ins. 50-60).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith in view of Kanevsky by specifically using a social security number to identify desired information, as taught by Kanevsky, to uniquely identify a speaker during data access.

7. Claims 3-5, 13, 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith in view of well known prior art (MPEP 2144.03) and further in view of Kanevsky.

Regarding claim 3, Smith in view of well known prior art teach everything claimed, as applied above (see claim 2), but Smith in view of well known prior art do not specifically teach "the identifier related to a speaker comprises spatial information." However, the examiner contends that this concept was well known in the art, as taught by Kanevsky.

In the same field of endeavor, Kanevsky discloses methods for speaker verification, identification, and classification employing non-acoustic and/or acoustic models. In addition, Kanevsky teaches that the indicia may include an identifying address (col. 3, Ins. 51-53).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith in view of well known prior art by specifically providing address information to identify a speaker, as taught by Kanevsky, since an address is a common means of identification.

Regarding claim 4, Smith in view of well known prior art and Kanevsky teach everything claimed, as applied above (see claim 3), but Smith in view of well known prior art and Kanevsky do not specifically teach "selecting a subset of records based on the captured identifier comprises selecting a subset of records spatially related to the captured identifier". However, the examiner takes official notice of the fact that the use of a personal identifier related to spatial information for the purpose of retrieving spatial information was well known in the art.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith in view of well known prior art and Kanevsky such that a subset of records is retrieved according to a spatial identifier, since this is a very efficient way to retrieve geographic data.

Regarding claim 5, Smith in view of well known prior art and Kanevsky teach everything claimed, as applied above (see claim 4). In addition, Smith teaches that the system may employ a limited version of speaker independent voice recognition technology to generate a codebook download request (col. 3, Ins. 30-34), but neither Smith nor Smith in view of well known prior art and Kanevsky specifically teach "determining the meaning of the vocal expression comprises verifying an identification

of the speaker.” However, the examiner contends that this concept was well known in the art, as taught by Kanevsky.

Kanevsky further teaches that a first spoken utterance can contain indicia of the speaker (col. 3, Ins. 22-25).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith in view of well known prior art and Kanevsky by specifically providing a vocal means of verifying identification, as taught by Kanevsky, to support hands-free operation.

Regarding claim 13, Smith in view of Kanevsky teach everything claimed, as applied above (see claim 12). And, as mentioned in the rejection of claim 12, Smith in view of Kanevsky teach the use of an address to identify a speaker (col. 3, Ins. 51-55), but Smith in view of Kanevsky do not specifically teach “the address information includes one or more of a street address, mailing address, zip code, electronic mail address, Internet address, and Web address.” However, the examiner takes official notice of the fact that it was well known in the art at the time of the invention that the term “address” (as used in Kanevsky, col. 3, Ins. 51-53) can be interpreted to mean at least one of the above mentioned forms.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith in view of Kanevsky such that address information was interpreted to mean one of the above-mentioned forms, since these are common interpretations.

Regarding claim 15, Smith in view of Kanevsky teach everything claimed, as applied above (see claim 14). And, as mentioned in the rejection of claim 14, Smith in view of Kanevsky teach the use of an address to identify a speaker (col. 3, Ins. 51-55), but Smith in view of Kanevsky do not specifically teach "the location information is one of a V&H coordinate pair, latitude/longitude information, street address, and spatial key." However, the examiner takes official notice of the fact that it was well known in the art at the time of the invention that the term "address" (as used in Kanevsky, col. 3, Ins. 51-53) was interpreted to mean at least one of the above mentioned forms.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith in view of Kanevsky such that address information was interpreted to mean one of the above-mentioned forms, since these are common interpretations.

Regarding claim 17, Smith in view of Kanevsky teach everything claimed, as applied above (see claim 16). And, as mentioned in the rejection of claim 14, Smith in view of Kanevsky teach the use of a name to identify a speaker (col. 3, Ins. 51-55), but Smith in view of Kanevsky do not specifically teach "the name includes one or more of a first name, last name, street name, city name, state name, country name." However, the examiner takes official notice of the fact that it was well known in the art at the time of the invention that the term "name" (as used in Kanevsky, col. 3, Ins. 51-53) was interpreted to mean at least one of the above mentioned forms.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith in view of Kanevsky such that name

information was interpreted to mean one of the above-mentioned forms, since these are common and useful interpretation.

8. Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith in view of Kanevsky and further in view of Ozsu et al. (Principles of Distributed Database Systems, Prentice-Hall, 1991), hereinafter referred to as Ozsu.

Regarding claim 7, Smith teaches everything claimed, as applied above (see claim 1). In addition, Smith teaches that an identifier is entered to access a codebook from the codebook library (col. 3, 10-12), but Smith does not specifically teach, "determining a linkage key based on the captured identifier." However, the examiner contends that this concept was well known in the art, as taught by Kanevsky and Ozsu. First consider Kanevsky.

In the same field of endeavor, Kanevsky teaches methods for speaker verification, identification, and classification employing non-acoustic and/or acoustic models where through the process of identification access is allowed into database systems (col. 1, lns. 26-30).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith by specifically allowing a user access to a database system, as taught by Kanevsky, for the purpose of accessing desired services. But Smith in view of Kanevsky do not specifically teach the use of a linkage key. However, the examiner contends that this concept was well known in the art, as taught by Ozsu.

In the same field of endeavor, Ozsu teaches distributed database systems where transparent name resolution across a distributed database is possible (p. 385, §13.2.1) which corresponds to the concept of a "linkage key."

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith in view of Kanevsky by specifically using a common name (a "linkage key"), as taught by Ozsu, for the purpose of simplifying access to distributed data.

Regarding claim 8, Smith teaches everything claimed, as applied above (see claim 1). In addition, Smith teaches that an identifier is entered using a speaker independent recognizer to access a codebook from the codebook library (col. 3, 10-12, 30-35), but Smith does not specifically teach, "determining a linkage key based on the meaning of the vocal expression." However, the examiner contends that this concept was well known in the art, as taught by Kanevsky and Ozsu. First consider Kanevsky.

In the same field of endeavor, Kanevsky teaches methods for speaker verification, identification, and classification employing non-acoustic and/or acoustic models where through the process of identification access is allowed into database systems (col. 1, Ins. 26-30, col. 3, Ins. 20-25).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith by specifically allowing a user access to a database system with spoken utterances, as taught by Kanevsky, for the purpose of accessing desired services. But Smith in view of Kanevsky do not specifically teach

the use of a linkage key. However, the examiner contends that this concept was well known in the art, as taught by Ozsu.

In the same field of endeavor, Ozsu teaches distributed database systems where transparent name resolution across a distributed database is possible (p. 385, §13.2.1) which corresponds to the concept of a "linkage key."

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith in view of Kanevsky by specifically using a common name (a "linkage key"), as taught by Ozsu, for the purpose of simplifying access to distributed data.

Regarding claim 9, Smith in view of Kanevsky and Ozsu teaches everything claimed, as applied above (see claim 8), but Smith in view of Kanevsky and Ozsu do not specifically teach, "the linkage key is a spatial key that defines a geographic location." However, the examiner contends that this concept was well known in the art, as taught by Kanevsky.

Kanevsky further teaches that the spoken utterances can contain speaker indicia (including address information) and that this information is decoded to access a database (col. 3, Ins. 10-30, Ins. 50-55).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith in view of Kanevsky and Ozsu by specifically providing the features, as taught by Kanevsky, to make the access of geographical information more logical.

Regarding claim 10, Smith in view of Kanevsky and Ozsu teaches everything claimed, as applied above (see claim 8), but Smith in view of Kanevsky and Ozsu do not specifically teach, "using the linkage key to obtain information related to the speaker." However, the examiner contends that this concept was well known in the art, as taught by Kanevsky.

Kanevsky further teaches that the spoken utterances can contain speaker indicia (including address information) and that this information is decoded to access a database having information attributable to the speaker (col. 3, Ins. 10-30, Ins. 50-55).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith in view of Kanevsky and Ozsu by specifically providing the features, as taught by Kanevsky, to access speaker specific data for the recognizer.

Citation of Pertinent Art

9. The following prior art made of record but not relied upon is considered pertinent to the applicant's disclosure:

- a. Infosino (US Patent 6,327,34) discloses a method for setting user communication parameters based on voice the identification of the user.
- b. Yuschik et al. (US Patent 6,356,868) discloses a voice print identification system that verifies a user's identity from a voice print collection.

- c. Zauner (WO 99/14923) discloses a telecommunication system with personal identification using speech recognition where the disposal of features may result according to the geographical location of the subscriber.

Conclusion

Any response to this office action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314

Hand-delivered responses should be brought to:

Crystal Park II
2121 Crystal Drive
Arlington, VA.
Sixth Floor (Receptionist)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. V. Paul Harper whose telephone number is (703) 305-4197. The examiner can normally be reached on Monday through Friday from 8:00 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold, can be reached on (703) 305-4379. The fax phone number for the Technology Center 2600 is (703) 872-9314.

Art Unit: 2654

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service office whose telephone number is (703) 306-0377.

VPH/vph
June 11, 2003

Marsha D Banks-Harold

MARSHA D. BANKS-HAROLD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600